

Data Quality Objectives

Length:	Two-day
Contact Hours:	16
Location:	Sacramento
Cost:	Free to DWR staff
Next Class:	Winter/Spring 2005
Prerequisite:	Knowledge of Introductory Statistics will be assumed
Scope:	Examples mainly from hazardous material sampling
Class Minimum:	15
Class Max:	18
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Characterization of environmental resources requires adequate planning to ensure that the right type, quality, and quantity of data are gathered to support confident decisions (See [Decision Process](#)). Data Quality Objectives (DQOs) are a part of the planning process designed to systematically guide the collection of scientifically defensible environmental data. Visual Sample Plan (VSP) is a software tool that was designed to assist the development of sampling plans as part of DQOs.

Although user-friendly and tailored for the non-statistician, there are many procedures within VSP that require some basic knowledge of sampling design, DQO process, and statistical concepts. This two-day VSP training course will provide some background on sampling design concepts and give the participants hands-on experience in working through the VSP procedures and methods. Examples in the class will be mainly from hazardous materials, but the principles are applicable to other fields of environmental research.

COURSE OUTLINE

Each participant will have a computer with VSP installed and will work through the case studies together with the instructor and individually.

DAY 1

Course Expectations, Prior Training, Schedule, Feedback, Load VSP, etc.

VSP Overview/Demo (Executive Summary)

Review of Systematic Planning, DQO Process, and DQA

Statistical Concept Review

Break

Statistical Sampling Designs Overview

VSP Maneuvering and Procedures (Part 1)

Lunch (on your own)

VSP Maneuvering and Procedures (Part 2)

Case Studies

- Judgment Sampling (Instructor-Led)
- Hotspot Objective: Minimize Samples (Instructor-Led)

Break

Case Studies

- Comparison Against a Threshold (Instructor-Led)
- Comparison Against Threshold (On Your Own)
- Introduce DQO/VSP Group Case Study

Break

Case Studies

- Group Breakout on DQO/VSP Case Study
- Confidence Interval Objective (Instructor-Led)

Questions, Issues, End of Day 1

Day 2

Questions, Quick Review

Collaborative Sampling Presentation

Case Studies

- Comparison Against Background (Instructor-Led)
- Adaptive Cluster Sampling (Instructor-Led and On Your Own)

Break

Case Studies

- Collaborative Sampling (Instructor-Led and On Your Own)
- Sequential Sampling (Instructor-Led and On Your Own)

Lunch (on your own)

Stratified Sampling Presentation

Case Study

- Within A Building Sampling (Instructor-Led)
- UXO Transect Sampling (Instructor-Led)

Break

Case Study

- Perimeter Sampling (Instructor-Led)

Group Breakout on DQO/VSP Case Study

End of Course